

In The Matter Of:

*THE PEOPLE OF THE STATE OF CALIFORNIA, ET AL. v.
PHILIP MORRIS, INC., ET AL.*

*RICHARD G. HABERKERN
Vol. 2, March 18, 1998*

*Huseby & Associates, An Interim Legal Services Company
Registered Professional Reporters
The Oak House
1316 Harding Place
Charlotte, NC 28204
(704) 333-9889 FAX: (704) 372-4593*

*Original File haber_ii.cat, 87 Pages
Min-U-Script® File ID: 0064002469*

Word Index included with this Min-U-Script®

Property of: Ness, Motley
Main PI File Room
Charleston, SC

Page 197

[1] SUPERIOR COURT OF THE STATE OF CALIFORNIA
[2] FOR THE CITY AND COUNTY OF SAN FRANCISCO
[3] CASE NO.: 980864
[4] ----- X
[5] THE PEOPLE OF THE STATE OF :
[6] CALIFORNIA, et al., :
[7] Plaintiffs, :
[8] v. :
[9] PHILIP MORRIS, INC., et al., :
[10] Defendants. :
[11] ----- X
[12] VOLUME II
[13] Video deposition of RICHARD G. HABERKERN
[14] (Taken by Plaintiffs)
[15] Winston-Salem, North Carolina
[16] March 18, 1998
[17]
[18] Reported by: Andrea L. Nobrega
[19] Court Reporter
[20] Notary Public
[21]
[22]
[23]
[24]
[25]

Page 198

[1] COMMONWEALTH OF MASSACHUSETTS
[2] MIDDLESEX, ss. SUPERIOR COURT DEPARTMENT
[3] OF THE TRIAL COURT
[4] CIVIL ACTION NO. 95-7378-J
[5] ----- X
[6] COMMONWEALTH OF MASSACHUSETTS, :
[7] Plaintiff, :
[8] v. :
[9] PHILIP MORRIS, INC., et al., :
[10] Defendants. :
[11] ----- X
[12]
[13] VOLUME II
[14] Video deposition of RICHARD G. HABERKERN
[15] (Taken by Plaintiffs)
[16] Winston-Salem, North Carolina
[17] March 18, 1998
[18]
[19] Reported by: Andrea L. Nobrega
[20] Court Reporter
[21] Notary Public
[22]
[23]
[24]
[25]

Page 199

[1] SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK
[2] ----- X
PHYLLIS SMALL and DENISE FUBINI, :
[3] Individually, and on behalf of others :
similarly situated, :
[4] Plaintiffs, :
- against - : Index No.
[5] LORILLARD TOBACCO COMPANY, INC., : 110949/96
LORILLARD, INC., LOEWS CORPORATION, :
[6] COUNCIL FOR TOBACCO RESEARCH-USA, : Justice Charles
INC., (Successor to Tobacco Industry : E. Ramos
[7] Research Committee), AND TOBACCO :
INSTITUTE, INC., :
[8] Defendants. :
----- X
[9]
[10]
[11] SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK
[12] ----- X
MARY ANN HOSKINS, Executrix of the :
[13] Estate of Edwin Paul Hoskins, WALTINA :
BROWN and DANTE AUBAIN, individually, :
[14] and on behalf of others similarly :
situated, :
[15] Plaintiffs, :
- against - : Index No.
[16] R.J. REYNOLDS TOBACCO COMPANY, RJR : 110951/96
NABISCO, INC., COUNCIL FOR TOBACCO :
[17] RESEARCH-USA, INC. (Successor to : Justice Charles
Tobacco Industry Research Committee), : E. Ramos
[18] AND TOBACCO INSTITUTE, INC., :
Defendants. :
[19] ----- X
[20]
[21]
[22]
[23]
[24]
[25]

Page 200

Page 201

[1] SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK
[2] ----- X
SHARLENE KOBERMAN and AUBREY HULSE, as:
[3] executrix, on behalf of the Estate of :
Lewis Hulse, individually, and on :
[4] behalf of others similarly situated, :
Plaintiffs, :
[5] - against - : Index No.
BROWN & WILLIAMSON TOBACCO : 110953/96
[6] CORPORATION, B.A.T. INDUSTRIES P.L.C., :
BATUS, INC., BATUS HOLDINGS, INC., : Justice Charles
[7] COUNCIL FOR TOBACCO RESEARCH-USA, INC.: E. Ramos
(Successor to Tobacco Industry :
[8] Research Committee), and TOBACCO :
INSTITUTE, INC., :
[9] Defendants. :
----- X

[10]
[11]
[12] SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK

[13] ----- X
ROSE FROSINA, ELIZABETH COLAVITO and :
[14] ANILDA ROSS, individually, and on :
behalf of others similarly situated, :
[15] Plaintiffs, :
- against - : Index No.
[16] PHILIP MORRIS, INC., PHILIP MORRIS : 110950/96
COMPANIES, INC., COUNCIL FOR TOBACCO :
[17] RESEARCH-USA, INC. (Successor to : Judge Charles
Tobacco Industry Research Committee), : E. Ramos
[18] AND TOBACCO INSTITUTE, INC., :
Defendants. :

[19] ----- X
[20]
[21]
[22]
[23]
[24]
[25]

[1] SUPREME COURT OF THE STATE OF NEW YORK
[2] COUNTY OF NEW YORK
[3] ----- X
[4] CATHERINE ZITO, PETER HOBERMANN, and :
[5] GEORGE ELISSEOU, individually, and on :
[6] behalf of others similarly situated, :
[7] Plaintiffs, :
[8] - against - : Index No.
[9] THE AMERICAN TOBACCO COMPANY, INC., : 110952/96
[10] AMERICAN BRANDS, INC., COUNCIL FOR :
[11] TOBACCO RESEARCH-USA, INC. (Successor : Justice Charles
[12] to Tobacco Industry Research : E. Ramos
[13] Committee), AND TOBACCO INSTITUTE, :
[14] INC., :
[15] Defendants. :
[16] ----- X
[17] VOLUME II
[18] Video deposition of RICHARD G. HABERKERN
[19] (Taken by Plaintiffs)
[20] Winston-Salem, North Carolina
[21] March 18, 1998
[22]
[23]
[24]
[25]

Page 202

[1] APPEARANCES OF COUNSEL:
[2] For the Plaintiffs: (The People of the State of
[3] California, et al.)
[4] MICHAEL SOBOL, Esq.
[5] Lieff, Cabraser, Helmann & Bernstein
[6] 275 Battery Street
[7] San Francisco, California 94111
[8] (415) 956-1000
[9]
[10] For the Plaintiffs: (Phyllis Small and Denise Fubini, et
[11] al.)
[12] JACK D. MAISTROS, Esq.
[13] Climaco, Climaco, Lefkowitz & Garofoli Co., L.P.A.
[14] Ninth Floor, The Halle Building
[15] Cleveland, Ohio 44115
[16] (216) 621-8484
[17]
[18] For the Plaintiff: (Commonwealth of Massachusetts)
[19] KARA J. LANE, Esq.
[20] Brown, Rudnick, Freed & Gesmer, P.C.
[21] Cityplace 1
[22] 185 Asylum Street
[23] Hartford, Connecticut 06103-3402
[24] (860) 509-6513
[25]

Page 203

(1) APPEARANCES OF COUNSEL: (Continued.)
(2) For the Defendant: (R.J. Reynolds Tobacco Company)
(3) MARILYN R. FORBES, Esq.
(4) Womble, Carlyle, Sandridge & Rice
(5) Suite 2100
(6) 150 Fayetteville Street Mall
(7) Raleigh, North Carolina 27602
(8) (919) 755-2122
(9)
(10) For the Defendant: (Philip Morris, Inc.)
(11) HELEN L. MARSH, Esq.
(12) Heller, Ehrman, White & McAuliffe
(13) 333 Bush Street
(14) San Francisco, California 94104-2878
(15) (415) 772-6000
(16)
(17) For the Witness:
(18) ANTHONY J. VRSECKY, Esq.
(19) Suite 100
(20) 2000 Frontis Plaza Boulevard
(21) Winston-Salem, North Carolina 27103
(22)
(23) WITNESS ADDRESS:
(24)
(25) [DELETED]

Page 204

(1) ALSO PRESENT:
(2) MARTIN NOBREGA, Videographer
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
(12) Video deposition of RICHARD G. HABERKERN, taken by
(13) the Plaintiffs, at 200 West Second Street,
(14) Winston-Salem, North Carolina, on the 18th day of March,
(15) 1998 at 9:39 a.m., before Andrea L. Nobrega, Court
(16) Reporter and Notary Public.
(17)
(18)
(19)
(20)
(21)
(22)
(23)
(24)
(25)

Page 205

(1) CONTENTS
(2) THE WITNESS: RICHARD G. HABERKERN EXAMINATION
(3) BY MR. MAISTROS: 207
(4) BY MS. FORBES: 270
(5) FURTHER EXAMINATION
(6) BY MR. MAISTROS: 271
(7) BY MR. SOBOL: 274
(8) BY MS. FORBES: 279
(9) INDEX OF EXHIBITS
(10) For the Plaintiffs Page
(11) 16 Memo from Barry Fagg to August Borschke
(12) Dated 04/22/88 238
(13) 17 Document from Tammie Greene
(14) Dated 10/20/88 248
(15) 18 Memo from W.L. Clapp to Dr. DiMarco
(16) Dated 12/21/88 253
(17) 19 Memo from W.L. Clapp to D.R. Pugh
(18) Dated 01/16/89 255
(19) 20 Memo from J.H. Robinson to Dr. Hayes
(20) Dated 12/15/89 257
(21) 21 Memo from Robert L. Suber to Dick
(22) Haberkern Dated 01/02/90 261
(23) 22 Memo from J.D. de Bethzy to Richard
(24) Haberkern Dated 01/04/90 265
(25)

Page 206

(1) INDEX OF EXHIBITS (Continued.)
(2) For the Plaintiffs Page
(3) 23 Memo from Rhenda Steele to Richard
(4) Haberkern Dated 10/31/91 270
(5)
(6)
(7)
(8)
(9)
(10)
(11)
(12)
(13)
(14)
(15)
(16)
(17)
(18)
(19)
(20)
(21)
(22)
(23)
(24)
(25)

Page 207

PROCEEDINGS

[1] Whereupon, RICHARD G. HABERKERN, having been previously
[2] sworn, was examined and testified as follows:

EXAMINATION BY COUNSEL FOR PLAINTIFFS

[3] PHYLLIS SMALL AND DENISE FUBINI, ET AL.

[4] BY MR. MAISTROS:

[5] Q: Good morning. How are you?

[6] A: I'm fine.

[7] Q: I think when we ended yesterday we were
[8] talking about on-line measurements for nicotine. I may
[9] be inaccurate in the way I described it, but again I
[10] would like you to tell me from a processing standpoint
[11] what is your understanding of the on-line capabilities
[12] Reynolds had while you were employed there for measuring
[13] nicotine in the manufacturing process?

[14] MS. FORBES: Objection, it
[15] mischaracterizes. I think he testified -

[16] MR. MAISTROS: He did what he did, Marilyn.
[17] No speaking objections today. We'll be here until 5:00
[18] o'clock. Just say I object.

[19] If you say I object I accept that as
[20] every objection in the world. No more speaking
[21] objections.

[22] MS. FORBES: Mr. Maistros, for California
[23] purposes, objection to the form is not sufficient. You

Page 208

[1] have to state your specific grounds for objections and
[2] we will continue to do so.

[3] MR. MAISTROS: Please don't coach the
[4] witness how to answer with your objections.

[5] Do you understand my question?

[6] THE WITNESS: Yes. I am not aware of any
[7] production level capability to measure nicotine on-line
[8] in tobacco.

[9] BY MR. MAISTROS:

[10] Q: At what point in the manufacturing process
[11] of cigarettes is the nicotine content of the tobacco
[12] measured?

[13] A: I believe at least for awhile there was
[14] some measuring of the nicotine in the stemmery. There
[15] may be some monitoring to know what grades of tobacco
[16] have what kind of nicotine level, so that when they are
[17] blended they can be consistent enough to meet the
[18] requirements of what would be in the final cigarette.

[19] Q: How about when the tobacco gets to the line
[20] for the manufacture of cigarettes, are there any
[21] measurements in between the point in time when the
[22] tobacco begins the manufacturing process and it ends up
[23] in the finished cigarette?

[24] A: Again, there may be some QA sampling,
[25] monitoring, but it's not for a control function.

Page 209 *

[1] Q: What's it for?

[2] A: Again, just to try to ensure that the
[3] product is consistent.

[4] Q: How do you distinguish between controlling
[5] the nicotine levels and monitoring the nicotine levels
[6] for consistency?

[7] MS. FORBES: Objection, ambiguous.

[8] THE WITNESS: Personally I would
[9] differentiate the two in that over time you work with
[10] averages and you would check periodically to make sure
[11] that there is no gross differences, whereas, in control
[12] you would take information on a fairly regular basis and
[13] use that for making adjustments.

[14] BY MR. MAISTROS:

[15] Q: Does Reynolds at the beginning of the
[16] manufacturing process know the nicotine content of the
[17] reconstituted tobacco it uses in the manufacturing
[18] process?

[19] A: Again, based on historical average in
[20] monitoring a reasonably close idea.

[21] Q: Does Reynolds know the nicotine content of
[22] the various leaf blends it uses at the beginning of the
[23] manufacturing process?

[24] A: I think on an average basis, yes.

[25] Q: What do you mean by an average basis?

Page 210

[1] A: This is not my area of expertise. I think
[2] that - nicotine level is something that is somewhat
[3] regulated, so the company has to have some idea and
[4] there is some measuring done, but it's not like every
[5] pound is measured or it's measured on a continuous
[6] basis.

[7] I'm sure if a lot of tobacco is purchased
[8] they have to have some idea about what the average
[9] nicotine level is.

[10] Q: Doesn't, in fact, Reynolds store its
[11] tobacco based upon nicotine content?

[12] MS. FORBES: Objection, lack of foundation.

[13] THE WITNESS: No, I don't think so.

[14] BY MR. MAISTROS:

[15] Q: They don't have different sheds that have
[16] different nicotine content tobacco contained in those
[17] sheds?

[18] A: I have never heard of that being the case.

[19] Q: Who would know more about that, you or Tim
[20] Martin?

[21] A: Probably Tim.

[22] Q: Yesterday you testified you were involved
[23] in the REST process from '90 to '93, '91 to '93. Wasn't
[24] it really '89?

[25] A: Could be. I don't remember exactly when we

Page 211

[1] started.

[2] Q: Advanced process design, you were in that
[3] position for what years?

[4] A: Advanced process technology, again, I'm not
[5] sure exactly. It was about nine years, say '84 to '93,
[6] something like that.

[7] Q: From about '89 to '93 or half that time you
[8] spent on this REST process and the other half you spent
[9] on what process?

[10] A: We had a range of small projects going on,
[11] exploratory things when I first went into R&D. At one
[12] point we were heavily involved in the Premier
[13] development, and that was virtually 100 percent for two
[14] and a half years, three years, something like that.

[15] Q: For you or all of advanced process?

[16] A: For all of advanced process.

[17] Q: How many people were in advanced process?

[18] A: At that point?

[19] Q: Yes.

[20] A: Probably eight or nine engineer/chemists
[21] and, say, four technicians.

[22] Q: That would have been during the Premier
[23] time period?

[24] A: Yes.

[25] Q: How about after that when you got into

Page 212

[1] REST, how many people?

[2] A: Again, it varied, seven, eight, nine
[3] technical people and two to three technicians.

[4] Q: Is that - you can tell me if I'm wrong,
[5] but during the '84 to '93 time period, was the majority
[6] of your time spent on Premier and REST?

[7] A: '84 to '93, yes.

[8] Q: Was the majority of these eight or nine
[9] engineers and two to four technicians, was a majority of
[10] their time spent on Premier and REST?

[11] A: Yes.

[12] Q: What percent of time do you think these
[13] people including yourself in this nine year period were
[14] working on Premier and REST?

[15] A: It would vary during that time frame. In
[16] the '84 to '86 time frame, zero because Premier - and
[17] again that's approximate times. We sort of phased into
[18] Premier. When process technology and development of
[19] which we were a part was split, I mentioned yesterday
[20] Lucien Bass - there was an organization form called
[21] operations development, and that took part of what was
[22] PT&D, process, technology and development.

[23] At that point my group, advanced process
[24] technology, became about 100 percent Premier oriented
[25] and that was maybe in the '86 time frame. So then we

Page 213

[1] were 100 percent for several years, then we went off and
[2] started working again on some other technologies.

[3] Then the priority shifted to the response
[4] to the Philip Morris low nicotine product, and I had
[5] several of my people working 100 percent on that, some
[6] of the others at a lower percent. Then it became as we
[7] learned what we were going to do, then the whole group
[8] shifted into the low nicotine effort.

[9] Then from that point on I would say risk
[10] work was maybe 90 percent of the group's effort.

[11] Q: Did you have chemists in your group?

[12] A: Yes.

[13] Q: That understood the chemical reactions of
[14] nicotine with the human body?

[15] A: No.

[16] Q: What chemists did you have?

[17] A: I had one organic chemist who was working
[18] on - I'm trying to remember what he was working on.

[19] Q: What was his name?

[20] A: Gary Dull.

[21] Q: D-u-l?

[22] A: D-u-l. We were looking into part of the
[23] chemistry of the tobacco through the REST process in
[24] terms of trying to ensure that we weren't changing it by
[25] the REST process by itself. He communicated with some

Page 214

[1] of the other product people with regard to some of the
[2] changes they were looking for in terms of flavor,
[3] character, and then he was assisting the chemical
[4] engineers as far as what we were doing in terms of
[5] process development.

[6] Q: Did you have somebody - do you know what
[7] Ames numbers are?

[8] A: Yes, generally.

[9] Q: Did you have somebody in advanced process
[10] that looked at Ames numbers for the REST tobacco?

[11] A: No. There is a group that did Ames tests
[12] and we submitted a lot of materials for Ames tests.

[13] Q: Was there any component to the REST process
[14] that had anything to do with efforts to achieve lower
[15] Ames numbers?

[16] A: Yes.

[17] Q: What component or how was it related?

[18] A: We did some work to try to remove protein
[19] from tobacco, and when we did we were able to reduce
[20] Ames numbers.

[21] Q: Anything else?

[22] A: That's all that I'm aware of.

[23] Q: Was any particular person assigned to the
[24] task of attempting to reduce Ames numbers through the
[25] REST tobacco process?

Page 215

[1] A: Yes.
[2] Q: Who?
[3] A: Dr. Bill Clapp.
[4] Q: What was his background?
[5] A: A chemist, and I believe he was in
[6] analytical chemistry for awhile. He was in the
[7] administrative side of R&D, I'm not sure what role.
[8] Q: What did you personally do on Premier?
[9] A: What did I personally do?
[10] Q: Yes.
[11] A: Or what did the group do?
[12] Q: What did you personally do?
[13] A: I was involved in integrating the efforts
[14] of my group to achieve the goals of Premier.
[15] Q: What was the goal of Premier?
[16] A: The goal of Premier was to produce a
[17] smoking product with a minimal amount of tar.
[18] Q: Was that the stated goal of Premier or is
[19] that your opinion as to the goal of Premier?
[20] A: That's my opinion.
[21] Q: Do you know what the stated goal of Premier
[22] was?
[23] A: I don't recollect.
[24] Q: Why was - why do you believe Premier was
[25] developed in part to create a cigarette with a minimal

Page 216

[1] amount of tar?
[2] A: To be an alternate product for consumers,
[3] people who might want such a product.
[4] Q: Was it thought of as a safer cigarette by
[5] Reynolds?
[6] MS. FORBES: Objection, over-broad, vague.
[7] THE WITNESS: I can't answer that.
[8] BY MR. MAISTROS:
[9] Q: Did you think of it as a safer cigarette?
[10] A: Safer.
[11] Q: Killed less people?
[12] MS. FORBES: Objection?
[13] MR. VRSECKY: Objection.
[14] THE WITNESS: No.
[15] BY MR. MAISTROS:
[16] Q: You didn't think of it as a cigarette that
[17] would cause harm to people?
[18] A: In those terms, no.
[19] Q: How did Reynolds determine how much
[20] nicotine Premier should contain?
[21] A: That's not my area. I don't know.
[22] Q: You weren't involved in that?
[23] A: No.
[24] Q: Your group was not involved in that?
[25] A: No.

Page 217

[1] Q: How was the nicotine put into Premier?
[2] A: We extracted tobacco, got the water
[3] solubles and that was applied to substrate pellets,
[4] plural, and then there was a tobacco sleeve around the
[5] perimeter of the product.
[6] Q: Where did you get the water solubles?
[7] A: Extracting a blend of tobacco.
[8] Q: From what process? Is that a new process
[9] for Premier?
[10] A: Yes.
[11] Q: What was it called?
[12] A: I can't remember it having any specific
[13] designation.
[14] Q: Who devised it?
[15] A: It's just a basic water extraction and I
[16] can't remember the name of the piece of equipment that
[17] was used. It was just basically a washing of water
[18] solubles out of the tobacco.
[19] Q: Had that process been used before by
[20] Reynolds?
[21] A: Water extraction has been used for a long
[22] time for the G7 process, the reconstitution process.
[23] Q: Were any of the G7 technologies utilized to
[24] obtain the water solubles for the Premier cigarette?
[25] A: Base knowledge maybe. My recollection is

Page 218

[1] that the equipment that was first used to extract the
[2] tobacco for Premier was a piece of equipment that was
[3] evaluated at one point as a potential improvement for
[4] the G7 process. As far as I know, it was never used for
[5] G7.
[6] Q: Was anything added to the water to extract
[7] the water tobacco solubles?
[8] A: No.
[9] Q: Just water?
[10] A: Right.
[11] Q: Was it heated?
[12] A: I believe so, yes, probably.
[13] Q: What type of tobacco was used?
[14] A: A wide range of different things were
[15] tried, anything to try to see if we could improve the
[16] aroma or the taste of the cigarette.
[17] What final blends, I just don't
[18] remember.
[19] Q: Did your group have responsibility for
[20] devising the mechanical means to apply the extract to
[21] the - what are they called, resin beads?
[22] A: Yeah. At the very early stages, yes.
[23] Q: Who told you at what nicotine content the
[24] nicotine should be applied to the resin beads?
[25] MS. FORBES: Objection, lack of foundation.

Page 219

[1] **THE WITNESS:** My hesitation is only I'm
[2] trying to remember. I do not remember any specific
[3] specification for nicotine level. We were given
[4] specifications - or not specifications, we were given
[5] different blends to use to extract different application
[6] levels to the substrate, what we called the substrate or
[7] beads, if you want to, and then we sent those materials
[8] off and they were used in product tests and there were
[9] many, many iterations, but I do not remember ever having
[10] a nicotine specified for anything.

[11] **BY MR. MAISTROS:**

[12] **Q:** You don't remember what it was or you don't
[13] remember having it specified?

[14] **A:** I don't remember having it specified.

[15] **Q:** Do you know if there was a specific
[16] nicotine level designed for Premier that was ultimately
[17] used?

[18] **A:** I am sure there must have been. Again, if
[19] a product - if Premier was to be sold commercially, it
[20] would have to have some sort of designation to meet
[21] federal requirements in terms of tar and nicotine.

[22] **Q:** Insofar as Premier was concerned, the
[23] nicotine yield of that particular cigarette could be
[24] absolutely controlled by Reynolds, could it not?

[25] **MS. FORBES:** Objection, over-broad,

Page 220

[1] ambiguous.

[2] **THE WITNESS:** I'm not a cigarette design
[3] person. What limits there are, I don't know. I mean
[4] obviously we could put nothing in there and there would
[5] be no nicotine delivery.

[6] **BY MR. MAISTROS:**

[7] **Q:** Was that discussed, to your knowledge?

[8] **A:** No.

[9] **Q:** Were there discussions as to whether or not
[10] Premier had to contain a minimum amount of nicotine to
[11] satisfy physiological needs of smokers?

[12] **A:** I have no idea.

[13] **Q:** Did you attend meetings where Premier was
[14] discussed by other groups within Reynolds?

[15] **A:** Yes.

[16] **Q:** At those meetings weren't there discussions
[17] concerning the amount of nicotine that would be required
[18] to make Premier successful?

[19] **MS. FORBES:** Objection, over-broad.

[20] **THE WITNESS:** Not that I am aware of.

[21] **BY MR. MAISTROS:**

[22] **Q:** Was tobacco burned in Premier?

[23] **A:** No.

[24] **Q:** How did Reynolds determine if the nicotine
[25] in Premier would be transferred to humans in a fashion

Page 221

[1] that was similar to smoke to cigarettes?

[2] **A:** I have no idea.

[3] **Q:** Did you attend meetings where the topic was
[4] discussed at Reynolds as to whether or not the Premier
[5] cigarette might be viewed as a drug delivery device?

[6] **A:** Not that I remember and I don't believe I
[7] was.

[8] **Q:** Had you ever heard anyone refer to Premier
[9] as a drug delivery device?

[10] **A:** Within Reynolds, no.

[11] **Q:** Do you know who devised, originally devised
[12] the idea for Premier?

[13] **A:** No, I don't.

[14] **Q:** Do you know what Michael Shannon's role was
[15] in Premier?

[16] **A:** I had some involvement with Mike Shannon in
[17] Premier, yes.

[18] **Q:** What was his role?

[19] **A:** He was - I don't know what title he would
[20] have had, but he was pretty much the prime coordinator
[21] for the development from a product standpoint.

[22] **Q:** What does that mean?

[23] **A:** He would be the one who we would work with
[24] in terms of what kind of materials would be needed for
[25] whatever range of product tests were going on. I'm sure

Page 222

[1] there were a lot of other people who worked with him as
[2] well in all different aspects of the development.

[3] **Q:** Have you ever attended any courses,
[4] lectures or read any material from Reynolds on what, if
[5] any, pharmacological affects nicotine has?

[6] **A:** I believe I attended one seminar and I
[7] can't remember the name, the man's name, but he came
[8] from Raleigh and there was some discussion - he is not
[9] a Reynolds person, but he is an independent researcher
[10] on nicotine and there was - I don't recollect exactly
[11] what the topic was. I just remember sort of being
[12] there.

[13] **Q:** Was this seminar put on by for particular
[14] people at Reynolds?

[15] **A:** Reynolds had a lot of outside speakers that
[16] would come in to discuss topics of interest, and they
[17] were generally open to anybody who could take the time
[18] to attend.

[19] On this particular seminar I do not
[20] remember if there were - I don't know if there were
[21] specific invitees or whether it was just a wide open
[22] seminar.

[23] **Q:** Who at Reynolds, in your opinion, would
[24] have the most knowledge concerning nicotine?

[25] **MS. FORBES:** Objection, over-broad, calls

Page 223

[1] for speculation.

[2] **THE WITNESS:** That is a pretty broad
[3] question, maybe Don de Bethizy.

[4] **BY MR. MAISTROS:**

[5] **Q:** Do you know why Reynolds was interested in
[6] determining the threshold level of nicotine necessary to
[7] produce a pharmacological component of satisfaction in
[8] smokers?

[9] **MS. FORBES:** Objection, vague, lack of
[10] foundation.

[11] **MR. VRSECKY:** Objection.

[12] **THE WITNESS:** I don't even know if the
[13] company was interested in that.

[14] **BY MR. MAISTROS:**

[15] **Q:** Well, you read from this document
[16] yesterday, Exhibit No. 5, and I will read it again.

[17] "The primary goal of the nicotine response study was to
[18] determine the threshold level of nicotine necessary to
[19] produce the pharmacological component of satisfaction
[20] under normal smoking conditions, both in terms of
[21] nominal FTC nicotine yield as well as actual blood
[22] levels of nicotine."

[23] **Why was that a goal of Reynolds?**

[24] **A:** I do not know.

[25] **Q:** You are on this document, correct, on the

Page 224

[1] first page?

[2] **A:** Yes.

[3] **Q:** It was produced by Walter Pritchard and
[4] John Robinson, correct?

[5] **A:** Yes.

[6] **Q:** You respect both of those gentlemen?

[7] **MR. VRSECKY:** Objection, that's vague,
[8] ambiguous.

[9] **BY MR. MAISTROS:**

[10] **Q:** Do you respect both of those gentlemen?

[11] **MS. FORBES:** Objection, argumentative.

[12] **MR. MAISTROS:** It's not argumentative.

[13] **Do you respect both of those gentlemen as**
[14] **scientists?**

[15] **THE WITNESS:** Yes.

[16] **BY MR. MAISTROS:**

[17] **Q:** And it's your testimony having worked at
[18] Reynolds for 20 years that you don't know why those two
[19] gentlemen would have stated "The primary goal of the
[20] nicotine response study was to determine the threshold
[21] level of nicotine necessary to produce the
[22] pharmacological component of satisfaction under normal
[23] smoking conditions, both in terms of nominal FTC
[24] nicotine yield as well as actual blood levels of
[25] nicotine?"

Page 225

[1] **MR. VRSECKY:** Objection, asked and
[2] answered.

[3] **MS. FORBES:** Objection.

[4] **BY MR. MAISTROS:**

[5] **Q:** That's your testimony, you don't have any
[6] idea why Reynolds might be interested in that?

[7] **MS. FORBES:** Objection, asked and answered.
[8] He testified yesterday he supplied the materials for
[9] this study only.

[10] **THE WITNESS:** It is my testimony that I do
[11] not understand all the complex reasons why this would be
[12] an objective. It is not my area of expertise, my area
[13] of interest.

[14] **BY MR. MAISTROS:**

[15] **Q:** Do you know what role nicotine plays in the
[16] smoking process?

[17] **A:** Do I know?

[18] **Q:** Yes.

[19] **A:** I understand it has some impact on
[20] receptors, whatever that is in the brain. That's
[21] something I have heard. I have heard it enough that I
[22] believe somebody must know what that means. Personally,
[23] I do not.

[24] **Q:** Do you have any other idea what role
[25] nicotine plays in the smoking process?

Page 226

[1] **A:** You are going to have to be more specific.

[2] **Q:** Do you know what a pharmacological effect
[3] is?

[4] **A:** In layman's terms, yes.

[5] **Q:** What?

[6] **A:** It is an effect something can have on, say,
[7] the body chemistry or how the body reacts.

[8] **Q:** Is it your understanding that nicotine has
[9] a pharmacological effect on the body?

[10] **A:** I have heard that said, yes.

[11] **Q:** Who has said that?

[12] **A:** Within the company, any one of a number of
[13] people who work in that area of interest.

[14] **Q:** Did you hear the people who were involved
[15] in Premier discuss a targeted pharmacological effect of
[16] nicotine in Premier?

[17] **MS. FORBES:** Objection, asked and answered.

[18] **THE WITNESS:** I cannot remember at this
[19] point ever hearing that.

[20] **BY MR. MAISTROS:**

[21] **Q:** What is your understanding of filter
[22] technology?

[23] **A:** Very limited.

[24] **MS. FORBES:** Objection, over-broad.

[25] **BY MR. MAISTROS:**

Page 227

- [1] Q: What do you know about filter technology?
[2] A: I know that there are ways to change filter
[3] efficiency by something related to the size of the
[4] fibers in a filter and how densely they are packed. I
[5] know there are plasticizers used to help form the
[6] filter. I know several other materials are used,
[7] cellulose acetate being one of the primary ones, very
[8] general.
[9] Q: Did any of the advance processes work
[10] involve filters?
[11] A: No.
[12] Q: What is your understanding of tar to
[13] nicotine ratios. You can tell me if you have no
[14] understanding.
[15] A: It's taking two measurements and dividing
[16] the numbers, one to the other.
[17] Q: Do you know what role tar to nicotine
[18] ratios plays in the success or failure of a cigarette,
[19] if any?
[20] A: The only thing I know is that there appears
[21] to be a range of tar to nicotine that is generally more
[22] acceptable to a smoker. When you get out of that range
[23] the products are not, in general, acceptable.
[24] Q: Do you know how you can alter tar to
[25] nicotine ratios?

Page 228

- [1] A: I know we tried several ways to do that.
[2] Q: Which ways are you familiar with?
[3] A: Well, you only have two dials to turn, tar
[4] and nicotine. You can take the nicotine - lower
[5] nicotine or raise nicotine or you can raise or lower the
[6] tar.
[7] Q: Which ways are you familiar with?
[8] A: We definitely worked on lowering the
[9] nicotine. For the nicotine RSM we raised the nicotine.
[10] For tar, about the only thing that can be done is put
[11] less mass in the product and that's done when we expand
[12] tobacco, use G13, to different levels in a cigarette.
[13] To my knowledge, in general, filtering or
[14] diluting a product can reduce tar and nicotine but
[15] doesn't have a big impact on the tar to nicotine ratio.
[16] Q: Were you involved in the expansion process?
[17] A: Not production level, no.
[18] Q: What involvement did you have?
[19] A: We did some research on looking at some
[20] alternate ways to expand tobacco.
[21] Q: Do you know when within a reasonable degree
[22] of certainty Reynolds ceased using freon in the
[23] expansion process?
[24] A: If you want me to give a date, I can't
[25] remember.

Page 229

- [1] Q: What about a decade?
[2] A: I would say the late '80s, but I don't
[3] know. I haven't categorized it in time.
[4] Q: Was freon used for anything other than the
[5] expanded tobacco process?
[6] A: We used it on an experimental basis as a
[7] solvent in the nicotine removal process, the liquid,
[8] liquid extraction.
[9] Q: Where did Reynolds purchase its freon when
[10] you were employed at Reynolds?
[11] A: I don't know.
[12] Q: Do you know why - do you personally know
[13] why Reynolds first began using expanded tobacco?
[14] A: I don't believe I was there at the time.
[15] If there was a specific objective, I have never heard,
[16] but it does reduce the weight of tobacco that would be
[17] in a cigarette which would reduce cost, and it also
[18] reduces the tar and nicotine delivery from a cigarette,
[19] all other things being held constant.
[20] Q: Do you know why Reynolds first began using
[21] reconstituted tobacco?
[22] A: I believe that was primarily for cost,
[23] using materials that otherwise in the past had been
[24] discarded could now be used.
[25] Q: Have you ever seen the actual cigarette

Page 230

- [1] specifications that are produced by research for a
[2] particular brand or family of cigarettes?
[3] A: Specifications - I have seen tobacco blend
[4] lists. As far as specifications for a complete
[5] cigarette, I don't believe I have ever seen one.
[6] Q: Do you know what acid aldehyde is?
[7] A: I have heard the term and I am trying to -
[8] at this point I cannot tell you. I know I have heard
[9] it.
[10] Q: You have no personal knowledge of its use,
[11] if any, at Reynolds?
[12] A: No.
[13] Q: You have heard of levulinic acid or
[14] nicotine levulinate?
[15] A: Yes.
[16] Q: Is it your testimony that that was not used
[17] by Reynolds in commercial cigarettes?
[18] A: That is not my testimony.
[19] Q: What is your testimony?
[20] A: What I testified to yesterday was I was not
[21] aware until I saw one of the documents, one of the
[22] exhibits, that I did not know it was used in a
[23] commercial product.
[24] Q: Did you know what it was before you saw
[25] that exhibit?

Page 231

[1] A: Yes.
[2] Q: What was your understanding of what it was?
[3] A: It is obviously an acid. I don't know
[4] where it's derived from, and I know it's been used in
[5] exploratory work in product development.
[6] Q: What is the primary goal or efforts of
[7] using levulinic acid?
[8] MS. FORBES: Objection, over-broad, vague.
[9] THE WITNESS: My only experience with its
[10] uses was to try to help make a prototype cigarette
[11] smoother.
[12] BY MR. MAISTROS:
[13] Q: Do you know if it had anything to do with
[14] the nicotine transfer efficiency or nicotine content or
[15] nicotine yield of cigarettes?
[16] MR. VRSECKY: Objection, asked and
[17] answered.
[18] THE WITNESS: I do not know.
[19] BY MR. MAISTROS:
[20] Q: Do you know what Chemsol is?
[21] A: Never heard of it.
[22] Q: Have you ever published any articles?
[23] A: No.
[24] Q: Did you participate in the preparation of
[25] lists that were submitted by Reynolds to the government

Page 232

[1] listing the processing aids of additives used in its
[2] products?
[3] A: No.
[4] Q: Are you familiar with those lists?
[5] A: I have seen them.
[6] Q: Do you know if ammonia was listed as an
[7] additive or a processing agent?
[8] A: For Reynolds?
[9] Q: Yes.
[10] A: I do not remember whether it was -- I would
[11] presume it was listed as a processing aid and it may
[12] have been listed as an additive as well, I don't know.
[13] Q: Do you distinguish when I use the word
[14] ammonia between diammonium phosphate and gaseous
[15] ammonia?
[16] A: Do I differentiate?
[17] Q: Yes.
[18] A: They are different.
[19] Q: Would your answer to my last question be
[20] different if I break those up?
[21] A: No.
[22] Q: Do you know when Reynolds used diammonium
[23] phosphate as opposed to gaseous ammonia?
[24] A: No. I believe gaseous ammonia is pretty
[25] dangerous to handle. It may have been used originally

Page 233

[1] in the KDN process, but I am really not that sure. I
[2] don't believe Reynolds used gaseous ammonia for awhile.
[3] Q: Did it use it for awhile or they didn't use
[4] it?
[5] A: I am not aware that we ever used it. I
[6] really just don't know.
[7] Q: Did Reynolds ever hire any former Philip
[8] Morris employees that you are aware of?
[9] A: Not specifically.
[10] Q: Did they ever -- from time to time Reynolds
[11] did reverse engineer competitors' cigarettes, correct?
[12] A: Yes.
[13] Q: How did they obtain those cigarettes? Did
[14] they just go buy them at the store?
[15] A: As far as I know.
[16] Q: To your knowledge, did Reynolds ever plant
[17] people in Philip Morris or other competitors' consumer
[18] study test for the specific purpose of obtaining
[19] examples of new products Philip Morris was experimenting
[20] with?
[21] A: I have never heard of such a thing.
[22] Q: Did you ever participate in any fashion in
[23] any consumer or product tests that were conducted by
[24] Reynolds?
[25] A: I was on a sensory panel, internal sensory

Page 234

[1] panel.
[2] Q: You were an actual smoker on a sensory
[3] panel?
[4] A: Uh-huh.
[5] Q: For a particular product?
[6] A: No.
[7] Q: Did you have to fill out an acknowledgement
[8] of risks associated with trying Reynolds' cigarettes?
[9] A: I don't remember doing that.
[10] Q: Were you asked any questions before you
[11] participated in that panel with respect to any prior or
[12] past history of heart disease or anything else?
[13] A: I don't remember whether I was or not.
[14] Q: Do you know what cotinine is?
[15] A: In a general sense.
[16] Q: What is it?
[17] A: My understanding is that the body converts
[18] nicotine into cotinine.
[19] Q: Do you know if Reynolds ever monitored
[20] cotinine levels in its smokers for the test panels?
[21] A: I don't recollect that.
[22] Q: Do you know what project RAN was?
[23] A: I think so.
[24] Q: What was it?
[25] A: If I remember the acronym it was reduced

Page 235

[1] Ames number, is that correct?
[2] Q: I have seen documents that say that, but is
[3] that the extent of your knowledge of it?
[4] A: Yes. We had an effort to reduce Ames
[5] numbers but RAN was quite a bit before REST, and I think
[6] I attended a meeting or two, but I right now don't
[7] remember what they were doing.
[8] Q: Do you know what project EW was?
[9] A: No.
[10] Q: Project XDU?
[11] A: I remember that acronym, but I can't
[12] remember right now what it was for.
[13] Q: Do you know the difference between free and
[14] bound nicotine?
[15] A: From a process standpoint sort of, yeah.
[16] Q: What do you mean?
[17] A: Nicotine typically is tied up as a salt and
[18] to free it up we would use something like ammonia so we
[19] could remove nicotine.
[20] Q: Do you know what unproteinated versus
[21] proteinated nicotine is?
[22] A: No.
[23] Q: Did Reynolds ever employ any other additive
[24] or compound to free up nicotine other than ammonia?
[25] A: I do not know specifically. I am sure many

Page 236

[1] things were tried. Almost any strong base would do
[2] that, I would think.
[3] Q: Are you aware of what work Calvin Neumann
[4] did at Reynolds?
[5] A: I cannot specifically tell you any projects
[6] that he was involved in.
[7] Q: Would you agree with the proposition that
[8] at least during your years at Reynolds, efforts were
[9] undertaken to - whether or not they resulted in
[10] commercial application, efforts were undertaken to be
[11] able to control the nicotine levels of its cigarettes?
[12] MS. FORBES: Objection, over-broad, vague,
[13] asked and answered.
[14] THE WITNESS: We definitely in the nicotine
[15] RSM did work to control the nicotine in cigarettes,
[16] so, yes.
[17] BY MR. MAISTROS:
[18] Q: What other component of tobacco did
[19] Reynolds attempt to control during the years you worked
[20] there?
[21] MR. VRSECKY: Objection, over-broad.
[22] THE WITNESS: What other component - you
[23] are going to have to be more specific.
[24] BY MR. MAISTROS:
[25] Q: RSM at least was an effort to control

Page 237

[1] nicotine levels in the cigarettes, correct?
[2] A: To control nicotine and tar, and if I
[3] remember, that was the primary matrix.
[4] Q: Was there any other compound or component
[5] of tobacco or the tobacco smoke that Reynolds attempted
[6] to control during your 20 years of employment?
[7] MS. FORBES: Objection.
[8] THE WITNESS: You are talking about all the
[9] research programs and -
[10] MR. MAISTROS: That you are aware of.
[11] MS. FORBES: Objection, over-broad, vague.
[12] THE WITNESS: Yes. There is some interest
[13] in trying to keep consistent sugar levels or flavors or
[14] there is all sorts of things that are - for a
[15] consistent product you try to control what's in the
[16] product, the paper quality, your filter quality.
[17] BY MR. MAISTROS:
[18] Q: And is it your testimony that those same
[19] efforts were or were not applied to nicotine?
[20] MS. FORBES: Objection, vague.
[21] MR. VRSECKY: Asked and answered.
[22] THE WITNESS: To the extent I already
[23] discussed, as far as I know nicotine was monitored in
[24] the types of tobaccos so that when a blend was put
[25] together there was a reasonable assurance that a blend

Page 238

[1] in a cigarette design would meet the criteria of the
[2] federal regulations on accuracy of the nicotine that was
[3] in the product.
[4] To that extent, that's all I know.
[5] BY MR. MAISTROS:
[6] Q: Have you read any memorandums by Teague,
[7] Senkus or Rodgman other than what you may have been
[8] shown yesterday. I'm not sure you were shown any by
[9] them.
[10] MS. FORBES: It's not out here.
[11] THE WITNESS: By Teague, you mean Claude
[12] Teague?
[13] BY MR. MAISTROS:
[14] Q: Yes.
[15] A: I don't ever remember reading a document
[16] that he wrote. Alan Rodgman, he was - apparently he
[17] did a lot of work on smoke chemistry. I may have read
[18] or looked at some portions of the results of work on
[19] tobacco smoke chemistry. I don't recollect any right
[20] now. Senkus, I can't remember reading anything that he
[21] wrote.
[22] MR. MAISTROS: Let's mark this as Exhibit
[23] No. 16.
[24] (Exhibit No. 16 marked for identification.)
[25] MR. VRSECKY: Did you hand me something

Page 239

[1] different?

[2] **MR. MAISTROS:** Sorry. I guess I don't have
[3] an extra one.

[4] Exhibit No. 17 is dated April 22, 1988.

[5] **THE WITNESS:** This has 16 on it.

[6] **BY MR. MAISTROS:**

[7] **Q:** I'm sorry, 16, April 22, 1988. It's from
[8] Barry Fagg to August Borschke. Do you know who August
[9] Borschke was?

[10] **A:** Yes.

[11] **Q:** Who is he?

[12] **A:** He is a patent lawyer.

[13] **Q:** And he worked for who?

[14] **A:** I can't remember who his supervisor is,
[15] was.

[16] **Q:** What company did he work for?

[17] **A:** Reynolds.

[18] **Q:** Nabisco or tobacco?

[19] **A:** As far as I know, tobacco.

[20] **Q:** Do you see the heading there underneath his
[21] name, also RJR Nabisco legal department patent section?

[22] **A:** Yes.

[23] **Q:** Do you know why that's on there?

[24] **MS. FORBES:** Objection, calls for
[25] speculation.

Page 240

[1] **THE WITNESS:** Yeah, I don't know. I don't.

[2] **BY MR. MAISTROS:**

[3] **Q:** Have you seen this document before?

[4] **A:** I cannot tell you. I would guess I have.

[5] **Q:** You are copied on it, correct?

[6] **A:** Yes.

[7] **Q:** And it's a two page document, correct?

[8] **A:** Yes.

[9] **Q:** And it was signed by Barry Fagg and
[10] witnessed by Gary Dull, which you have identified this
[11] morning. Can you read that second name? Does it look
[12] like Clapp to you?

[13] **A:** It might be.

[14] **Q:** Those people in 1988 were in advanced
[15] process, were they not?

[16] **A:** I think so.

[17] **Q:** Barry Fagg was, correct?

[18] **A:** Yes.

[19] **Q:** And Gary Dull was, right?

[20] **A:** Yes. All three of them were in my group.
[21] Whether they were in '88, I really can't tell you right
[22] now.

[23] **Q:** The first sentence of this document
[24] underneath the heading incorporation of levulinic acid
[25] in the tobacco fraction says "The addition of levulinic

Page 241

[1] acid to tobacco materials has proven in the past to
[2] affect desirable smoking characteristics to a tobacco
[3] product incorporating the material, i.e., reduced
[4] harshness, modify nicotine delivery, etc."

[5] Is that something you were familiar with at
[6] least in 1988?

[7] **A:** I must have been at least in '88.

[8] **Q:** What was your understanding of the effect
[9] levulinic acid had on modifying nicotine delivery?

[10] **A:** That I don't know, other than I would guess
[11] as an acid it would reduce nicotine delivery.

[12] **Q:** You see the specific embodiment section?

[13] **A:** Yes.

[14] **Q:** The second paragraph says "A spray dried
[15] water extract of a burley blend was redissolved into
[16] water and levulinic acid added to the solution in a 3:1
[17] molar ratio of levulinic acid to nicotine in the
[18] solution." Do you know what work this is related to?

[19] **A:** I cannot tell you right now whether it was
[20] a total exploratory effort, bench top type thing or
[21] whether it was related to a product program.

[22] **Q:** Then you see down below in the last
[23] sentence it says "The modified material is being
[24] evaluated in the XGT project." What was that?

[25] **A:** I believe that was a low tar to nicotine

Page 242

[1] project.

[2] **Q:** Next paragraph, "Levulinic acid was
[3] incorporated into a burley spray dried powder (nicotine
[4] at 8-9%) and an essence produced from a burley spray
[5] dried powder extracted with absolute ethanol (nicotine
[6] at 30-35%)." Do you know what that's in reference to?

[7] **A:** Again, it was bench top research. It says
[8] down below that they were - those materials were
[9] provided to XGT.

[10] **Q:** Were you aware of a burley spray dried
[11] powder?

[12] **A:** Yes.

[13] **Q:** What is that?

[14] **A:** We talked earlier about water extracting
[15] tobacco of different types, and we talked about
[16] "concentrating" those extracts basically by removing
[17] water. In spray drying you very quickly flash off
[18] water, all of the water basically, and you end up with a
[19] dry powder made up of what was extracted by water and
[20] it's very similar - instant coffee is basically a spray
[21] dried powder of coffee extract. So it's the same sort
[22] of thing.

[23] **Q:** And this spray dried powder had a nicotine
[24] content of eight to nine percent or did it have varying
[25] nicotine content?

Page 243

[1] **MS. FORBES:** Objection, lack of foundation.
[2] **THE WITNESS:** From what he says here that's
[3] what it resulted from, that particular burley blend.

[4] **BY MR. MAISTROS:**

[5] **Q:** And where did Reynolds use this burley
[6] spray dried powder?

[7] **MS. FORBES:** Same objection, lack of
[8] foundation.

[9] **THE WITNESS:** Well, according to this it
[10] was used in a -- some product development or exploratory
[11] program.

[12] **BY MR. MAISTROS:**

[13] **Q:** Do you know anywhere else it was used?

[14] **A:** When you have water solubles in -- of
[15] almost any organic material in a liquid form, it can
[16] mold. It can -- it can mold or rot. We used spray
[17] drying particularly during our development phases to
[18] stabilize extracts. We did some testing to make sure
[19] that if you spray dried an extract and then re-dissolved
[20] it, what the differences were, so during the early
[21] stages of Premier we would prepare extracts and spray
[22] dry them just for stable storage.

[23] We did that on a regular basis. Any time
[24] we extracted something and did not have an immediate
[25] need for that tobacco extract and there was a thought we

Page 244

[1] might need it in the future, we would spray dry it.

[2] **Q:** Were any of these -- is there a name for
[3] this spray dried extract, a technical name?

[4] **MS. FORBES:** Objection, over-broad.

[5] **THE WITNESS:** No.

[6] **BY MR. MAISTROS:**

[7] **Q:** Were any of these spray dried extracts
[8] re-applied in the manufacturing process?

[9] **A:** No.

[10] **Q:** How would you know that?

[11] **A:** Well, number one, it would never be
[12] approved and there was no reason to.

[13] **Q:** Why wouldn't it be approved?

[14] **A:** Because it's not an acceptable ingredient
[15] into a production process.

[16] **Q:** Why?

[17] **MS. FORBES:** Objection, argumentative,
[18] asked and answered.

[19] **MR. MAISTROS:** It's not argumentative,
[20] Marilyn. It's a question.

[21] Why?

[22] **THE WITNESS:** It's the sort of thing that
[23] -- the company is very careful about anything it puts
[24] into a product, both for real reasons and foreseen
[25] reasons.

Page 245

BY MR. MAISTROS:

[1] **Q:** What would be the concern about using
[2] burley spray dried powder containing nicotine at eight
[3] to nine percent?

[4] **MS. FORBES:** Objection, asked and answered,
[5] argumentative.

[6] **THE WITNESS:** Well, it wouldn't be used to
[7] contribute to a product and it's not -- it was never in
[8] enough quantity to worry about using it to save money
[9] versus landfilling it if it wasn't used. There was just
[10] no rationale for putting it in any product.

[11] **BY MR. MAISTROS:**

[12] **Q:** Why did Barry Fagg then create a memo where
[13] he talks about creating a patent for it and he talks
[14] about using it in project XGT if it would never be used?

[15] **MS. FORBES:** Objection, calls for
[16] speculation, argumentative. Let's move on.

[17] **BY MR. MAISTROS:**

[18] **Q:** Do you know why he would do that?

[19] **A:** There were many, many things done for
[20] learning, for experimentation, that's why it would have
[21] been done.

[22] **Q:** What's the essences referenced in that last
[23] paragraph, an essence produced from a burley spray dried
[24] powder extracted with absolute ethanol, nicotine at 30
[25]

Page 246

[1] to 35 percent?

[2] **A:** Instead of using water to extract, ethanol
[3] was used to extract.

[4] **Q:** Do you know why?

[5] **A:** Pardon me?

[6] **Q:** Do you know why?

[7] **A:** Because you get different types of
[8] materials, flavor compounds out of the tobacco.

[9] **Q:** Do you know what the effect on the end
[10] nicotine content was of using ethanol versus water?

[11] **A:** Restate that, please.

[12] **Q:** Do you know what the difference was, if
[13] any, on the end nicotine content of using ethanol versus
[14] water?

[15] **A:** The end nicotine content of the resulting
[16] flavor of the extract?

[17] **Q:** Yes.

[18] **A:** The nicotine was higher with ethanol
[19] because ethanol is more selective and took less of the
[20] other stuff.

[21] **Q:** Do you know why ethanol was used as opposed
[22] to water for this extract process?

[23] **A:** Because it gave different flavor compounds.

[24] **Q:** Does it have anything to do with the fact
[25] that it also produced an extract containing a higher

Page 247

[1] content of nicotine?

[2] **MR. VRSECKY:** Objection, asked and
[3] answered.

[4] **THE WITNESS:** If anything, that would have
[5] been considered a problem.

[6] **BY MR. MAISTROS:**

[7] **Q:** Do you see the summary at the last page?
[8] "Levulinic acid can be successfully incorporated into
[9] tobacco fractions produced using the water extracts of
[10] tobacco as starting mediums. These concentrates can
[11] then be incorporated into tobacco products to effect
[12] desirable smoking characteristics."

[13] Do you know what desirable smoking
[14] characteristic Mr. Fagg is referring to?

[15] **A:** I do not remember specifically.

[16] **Q:** Do you know if he is referring to the same
[17] desirable smoking characteristics on the first page in
[18] the introduction where he lists reduced harshness,
[19] modify nicotine delivery, etc.?

[20] **MR. VRSECKY:** Objection, he has answered.

[21] **MS. FORBES:** Objection.

[22] **THE WITNESS:** My recollection is XGT was an
[23] effort to reduce the tar delivery in cigarettes to see
[24] if that was possible to make a cigarette that consumers
[25] would find acceptable. If you reduce - this is my

Page 248

[1] recollection, if you reduce the tar, then the products
[2] were harsher and not acceptable. The levulinic acid was
[3] a means to try to make the product taste smoother.

[4] **BY MR. MAISTROS:**

[5] **Q:** Has Reynolds commercially sold cigarettes
[6] with reduced tar levels?

[7] **MS. FORBES:** Objection, over-broad.

[8] **THE WITNESS:** Yeah, in all the low tar
[9] products.

[10] **BY MR. MAISTROS:**

[11] **Q:** How do they deal with the harshness?

[12] **MS. FORBES:** Objection, over-broad.

[13] **THE WITNESS:** Again, this is out of my
[14] area, but it's done by dilution. Everything is diluted.
[15] There is less of everything there.

[16] **MR. MAISTROS:** Let's go off the record.
[17] (Off-the-record, brief recess.)
[18] (Exhibit No. 17 marked for identification.)

[19] **BY MR. MAISTROS:**

[20] **Q:** If we could back up to Exhibit No. 16.
[21] Does this appear to be an accurate copy of a document
[22] that's kept in the ordinary course of business at
[23] Reynolds?

[24] **A:** It appears to be.

[25] **Q:** You received a copy of the same?

Page 249

[1] **A:** Yes.

[2] **Q:** Exhibit No. 17 in front of you is dated
[3] October 20, 1988. The author is a Tammie Greene. Do
[4] you know who Tammie Green is or was?

[5] **A:** At one point she was a secretary in brands.

[6] **Q:** Brands?

[7] **A:** Yeah.

[8] **Q:** Do you know if she is still at Reynolds?

[9] **A:** I don't know.

[10] **Q:** This is to a K.R. DiMarco and a W.M.
[11] Hildebolt. What were their positions in October of
[12] 1988?

[13] **A:** DiMarco was the head of R&D. He was either
[14] a vice president or an executive vice president. Bill
[15] Hildebolt reported to him and he was a level down.
[16] Whether he was a vice president or director or what, I'm
[17] not sure.

[18] **Q:** You are reflected as being copied on the
[19] fourth page of this document and take your time and look
[20] at it.

[21] The first question is, do you recall
[22] receiving a copy of this document in October of '88?

[23] **A:** No, I do not recall.

[24] **Q:** Have you looked at the document?

[25] **A:** I am looking at it.

Page 250

[1] **Q:** There is an executive summary on the first
[2] page. You can read the whole document if you like, but
[3] the title of the document is intercepted Philip Morris
[4] products nicotine/flavor enhancement technology.

[5] It says "Recently, two Philip Morris
[6] products coded N4 and J2, were intercepted from a
[7] consumer test panel and then analyzed by R&D. The
[8] results from the analyses have provided significant
[9] intelligence regarding a new Philip Morris technology
[10] and may indicate a potential product application for
[11] that technology."

[12] Were you aware of this in October of '88?

[13] **A:** I was apparently copied. I do not
[14] recollect the circumstances at this.

[15] **Q:** The executive summary - you can read the
[16] first three sentence if you like, but the first
[17] paragraph is talking about a potential use of certain
[18] technology and it says "It is important to note that
[19] these products represent technology very similar to
[20] project XGT in that RJR is preparing low tar and
[21] nicotine blends which are then enhanced by the addition
[22] of natural tobacco extract containing high levels of
[23] nicotine."

[24] Is that what your understanding of what
[25] project XGT was?

Page 251

[1] **MS. FORBES:** Objection, asked and answered.
[2] **THE WITNESS:** Yeah, the intention was to
[3] produce a low tar product while delivering no more than
[4] normal amounts of nicotine.

[5] **BY MR. MAISTROS:**

[6] **Q:** What was a normal amount of nicotine?

[7] **A:** Standard medium range for whatever tar
[8] level might be worked on, whether it be low tar, medium
[9] tar or whatever.

[10] **Q:** How did Reynolds know what a normal
[11] nicotine level was for a particular tar cigarette?

[12] **MS. FORBES:** Objection, argumentative,
[13] asked and answered.

[14] **THE WITNESS:** I don't know. It's federally
[15] mandated, I believe, for tar levels to know what the
[16] approximate nicotine level is for a product, and if you
[17] look at all of those together there is a range, an
[18] average, a mean for products within a company or across
[19] the whole industry.

[20] **BY MR. MAISTROS:**

[21] **Q:** How did Reynolds intend to obtain natural
[22] tobacco extract for use in project XGT?

[23] **A:** How did they intend to?

[24] **Q:** Or how did they?

[25] **A:** Water extracts.

Page 252

[1] **Q:** Is that your understanding of what natural
[2] tobacco extract is?

[3] **A:** Yes.

[4] **Q:** How was that natural tobacco extract
[5] process to obtain high levels of nicotine?

[6] **MR. VRSECKY:** Objection, vague.

[7] **MS. FORBES:** Could you give me that
[8] question back.

[9] (The record was read.)

[10] **THE WITNESS:** Okay. Hypothetically you
[11] have a tobacco that is three percent nicotine,
[12] naturally, and typically on a flue-cured it might be 50
[13] percent water soluble, the rest non-water soluble,
[14] cellulose, waxes, that sort of thing. You do a water
[15] extraction. For every pound of original tobacco you get
[16] half a pound of water solubles, but you have half as
[17] much total material, so the concentration of that
[18] extract is now six percent. Six percent nicotine in
[19] relative to the remainder of the material - the
[20] remainder of the water solubles. That is a concentrated
[21] nicotine relative or in comparison to what it would be
[22] in natural tobacco.

[23] **BY MR. MAISTROS:**

[24] **Q:** Reynolds has commercially sold low nicotine
[25] products?

Page 253

[1] **A:** No.

[2] **Q:** They have not?

[3] **A:** Low tar and nicotine products, yes. Low
[4] nicotine, I don't believe so.

[5] **Q:** You can't think of any specific cigarette
[6] that had as its grounding a low nicotine effort or goal?

[7] **A:** Only when we in the development mode try to
[8] be in a position to respond to Philip Morris' if it was
[9] successful.

[10] **Q:** Any specific cigarette you have in mind in
[11] a development mode?

[12] **MS. FORBES:** Objection, asked and answered.

[13] **THE WITNESS:** There was the project LN, I
[14] believe it was, low nicotine. It was just could we make
[15] a cigarette that might be a reasonable response to what
[16] we saw in the marketplace with Philip Morris' low
[17] nicotine product.

[18] **MR. MAISTROS:** Let's mark this as Exhibit
[19] No. 18.

[20] (Exhibit No. 18 marked for identification.)

[21] **BY MR. MAISTROS:**

[22] **Q:** Exhibit No. 18 is dated December 21, 1988
[23] from a W. Clapp to a Dr. DiMarco. You are copied on it.
[24] Do you recall receiving a copy of this memorandum in
[25] 1988?

Page 254

[1] **A:** Not specifically, but I could very well
[2] have.

[3] **Q:** If you take a look at the document I would
[4] ask you if you know generally why this document was sent
[5] or what was the subject of this document?

[6] **A:** I believe this was - looking at the time
[7] frame, this may have been during the period where the
[8] company became aware of Philip Morris' effort related to
[9] a low nicotine product using supercritical extraction
[10] and we were - we looked at a number of process options
[11] to try to be in a position to respond to that product
[12] effort.

[13] **Q:** At this point in time W.L. Clapp was in
[14] your group?

[15] **A:** Yes.

[16] **Q:** Did you supervise or participate in any of
[17] the work that Clapp was doing with respect to this
[18] particular issue?

[19] **A:** Yes.

[20] **Q:** In what way?

[21] **A:** In terms of relative priorities within the
[22] group, we were providing some technical expertise. We
[23] all did some literature searching, a range of things.

[24] We had looked at supercritical extraction
[25] before. We thought it was a very interesting

Page 255

[1] technology, had some interesting potential capabilities,
[2] but for this purpose we felt we couldn't use it to try
[3] to respond to what Philip Morris was doing within a time
[4] frame that was practical.

[5] Q: In the last paragraph on the first page it
[6] refers to "our own work at Avoca supports the PM data
[7] and will be in a report to be issued shortly." Do you
[8] know what that's in reference to?

[9] A: We had a very small batch supercritical
[10] extractor and by small I mean less than a gallon, and we
[11] were doing - as I mentioned before, we had investigated
[12] supercritical. We were working on very small lots of
[13] tobacco trying to see what sort of capabilities the
[14] process had. So we did some - if I recollect right, we
[15] did some directed tests along the description of the
[16] Vitzthum patent to see if nicotine came out.

[17] Q: Does this appear to be an accurate copy of
[18] a document kept in the ordinary course of business by
[19] Reynolds?

[20] A: Except for the blank page in the back, yes.

[21] MR. MAISTROS: Mark the next document.
[22] (Exhibit No. 19 marked for identification.)

[23] BY MR. MAISTROS:

[24] Q: Exhibit No. 19 is dated January 16, 1989.

[25] I ask you if you have seen a copy of that document

Page 256

[1] before?

[2] A: Again, I do not remember this specifically.
[3] This was ten years ago or nine years ago. I was copied
[4] on it and I am sure I received it.

[5] Q: And does it appear to be an accurate copy
[6] of a record kept in the ordinary course of business by
[7] Reynolds?

[8] A: Except for the blank page at the end, yes.

[9] Q: This work in these last two exhibits has
[10] nothing to do with REST, does it?

[11] A: No, other than, as I mentioned, we did some
[12] exploratory with supercritical. We did some focus work
[13] relative to nicotine removal of the supercritical
[14] because of the PM initiative and the early focus on REST
[15] was driven by the same priority.

[16] Q: Have you ever heard of nicotine extracts as
[17] being referred to as flavor additives at Reynolds?

[18] A: No - wait, I say that pretty quickly. I
[19] don't remember. Nicotine extracts - we used tobacco
[20] extracts on an exploratory level added to tobacco that
[21] was put in test cigarettes.

[22] Q: Test marketed?

[23] A: No, sensory panel, yes, outside test panel,
[24] probably. Any sort of test market, I don't think so.

[25] Q: When I use the word tobacco - when you use

Page 257

[1] the word tobacco extracts, are you talking about a
[2] process that would be similar to applying water to
[3] tobacco and taking the residue and that's a tobacco
[4] extract?

[5] A: Right.

[6] Q: Do you know if that or any other process
[7] was ever used to - let me start over. That tobacco
[8] extract, is that a technical phrase or is that just
[9] something you are using?

[10] A: Tobacco extract, I consider that a generic
[11] phrase.

[12] Q: Do you know if any of the additives or
[13] flavorants that Reynolds ever listed on its list to the
[14] government contained a tobacco extract type product?

[15] MS. FORBES: Objection, over-broad.

[16] THE WITNESS: I don't know.

[17] BY MR. MAISTROS:

[18] Q: But it's your -

[19] A: Let me correct something I said once
[20] before. Premier did use a tobacco extract.

[21] Q: Other than Premier?

[22] A: No.

[23] MR. MAISTROS: Mark this as the next
[24] exhibit.

[25] (Exhibit No. 20 marked for identification.)

Page 258

[1] BY MR. MAISTROS:

[2] Q: Exhibit No. 20 is dated December 15, 1989
[3] from John Robinson to - well, from J.D. Robinson to
[4] A.W. Hayes with you being copied. First, do you recall
[5] receiving a copy of this document?

[6] A: Again, I do not remember specifically
[7] receiving this document.

[8] Q: And at this point in time, '89, Robinson
[9] was in what department?

[10] A: I take it from what's said in the memo here
[11] the bio-behavioral division.

[12] Q: And Hayes was what position?

[13] A: He was the - Robinson would have reported
[14] to Hayes, but he was a director, I guess, of Reynolds.

[15] Q: Hayes was?

[16] A: Of R&D, I mean.

[17] Q: Did he have anything to do with toxicology?

[18] A: Yes.

[19] Q: What did he have to do with that?

[20] A: I believe the whole toxicology area
[21] reported to him.

[22] Q: The subject says PT&D controlled nicotine
[23] technology?

[24] A: Right.

[25] Q: What is PT&D?

Page 259

[1] A: Process technology and development.
[2] Q: And the first sentence says "The technology
[3] developed by Mr. D. Haberkern." That's you, right?
[4] A: Yes.
[5] Q: "And his people represents a very exciting
[6] and powerful tool for the study of nicotine." Do you
[7] know what that's in reference to?
[8] A: The very similar if not the same thing as
[9] what ended up being the nicotine RSM.
[10] Q: Is that REST?
[11] A: No, it's REST in conjunction with the
[12] auxiliary liquid, liquid extraction process.
[13] Q: I want to distinguish between then REST and
[14] you are calling them auxiliary uses?
[15] A: Processes.
[16] Q: Auxiliary processes. So you think this
[17] first sentence is referring to some of those auxiliary
[18] processes as opposed to REST?
[19] A: No, the two of them in combination.
[20] Q: "The ability to extract nicotine from
[21] tobacco and then re-apply the extract at precise levels
[22] to the final cigarette blends (largely independent of
[23] 'tar' levels) would have application to a number of
[24] basic research and product related projects."
[25] Is that both REST and the auxiliary uses?

Page 260

[1] A: The two of them together, yes.
[2] Q: Did you have any recollection of discussing
[3] these potential uses with John Robinson in '89?
[4] A: Not specifically. I remember John being
[5] very interested that he might have some materials that
[6] would allow him to do some tests.
[7] Q: In the last paragraph of the first page it
[8] says "Systematic investigation of cigarette nicotine
[9] yields and the formation of tobacco specific
[10] nitrosamines. (Don de Bethizy will provide comments on
[11] these applications)."
[12] Do you know what tobacco specific
[13] nitrosamines are?
[14] A: I know nitrosamines are a nitrogenous type
[15] compound and there are some of those in tobacco, so
[16] those are tobacco specific nitrosamines.
[17] Q: Do you know what Don de Bethizy'
[18] involvement was with respect to those?
[19] A: At that point in time I don't recollect.
[20] Q: Do you know why Dr. Reynolds was copied on
[21] this memo?
[22] MS. FORBES: Objection, calls for
[23] speculation.
[24] THE WITNESS: I believe John Robinson
[25] reported to John Reynolds at this point.

Page 261

[1] BY MR. MAISTROS:
[2] Q: And John Reynolds held what position?
[3] A: He may have been a manager - I don't know.
[4] I don't remember specifically what his title was.
[5] Q: Does this appear to be an accurate copy of
[6] a document that was kept by Reynolds in the ordinary
[7] course of business?
[8] A: Yes.
[9] MR. MAISTROS: Let's mark the next exhibit.
[10] (Exhibit No. 21 marked for identification.)
[11] BY MR. MAISTROS:
[12] Q: Exhibit No. 21 is dated January 22, 1990.
[13] It's to you from Dr. Suber dated January 2, 1990. Do
[14] you recall receiving this memorandum?
[15] A: Again, not specifically, but my name is on
[16] it. I guess I got it.
[17] Q: It says in here in the first paragraph "The
[18] use of freon 11 or 123." Do you know what that is?
[19] A: It's another type of freon.
[20] Q: "To extract the nicotine resulted in no
[21] significant differences in residues between the tobacco
[22] with extract re-applied in the unprocessed control." Do
[23] you know what that's in reference to?
[24] A: You are going to have to excuse me and let
[25] me try to establish the context here.

Page 262

[1] My interpretation of what I am reading here
[2] is that there was a comparison done between the starting
[3] material and the material after going through the REST
[4] process, and there were no differences found. As far as
[5] the use of freon, that would have been in the ancillary
[6] process of removing nicotine. When it mentions
[7] differences in residues, I'm not sure what that applies
[8] to.
[9] Q: Is it your understanding, though, that the
[10] overall purpose of utilizing REST tobaccos was to
[11] control the delivery and obtain a target nicotine level?
[12] MS. FORBES: Objection, asked and answered.
[13] MR. VRSECKY: Objection.
[14] THE WITNESS: I do not agree with that at
[15] all.
[16] BY MR. MAISTROS:
[17] Q: What was Dr. Suber's title at this point in
[18] time?
[19] A: I believe director of smoking and health.
[20] Q: Could you read the first sentence of the
[21] second paragraph?
[22] A: Okay.
[23] Q: Out loud.
[24] A: "The nicotine deliveries from cigarettes
[25] containing REST tobaccos can be controlled to deliver a

Page 263

[1] target nicotine."

[2] Q: And do you or don't you agree with that
[3] statement?

[4] MS. FORBES: Objection, asked and answered.

[5] THE WITNESS: I agree with it.

[6] BY MR. MAISTROS:

[7] Q: And is it your testimony that that was one
[8] of the benefits or goals of REST?

[9] MR. VRSECKY: Objection, asked and
[10] answered.

[11] THE WITNESS: The original goal and benefit
[12] of REST in conjunction with the ancillary liquid, liquid
[13] extraction process was to produce a low nicotine
[14] product. Yes, that is a controlled nicotine product
[15] that never got outside of development planning as a
[16] response to what Philip Morris was doing.

[17] BY MR. MAISTROS:

[18] Q: I believe you testified yesterday, though,
[19] that some of the REST produced tobacco made its way into
[20] the reconstituted G7 process?

[21] A: That's correct.

[22] Q: Do you know how much?

[23] A: On the order of 20,000 pounds.

[24] Q: How do you know that?

[25] A: Since yesterday we have contacted Dr. Suber

Page 264

[1] who checked his files and found a letter approving the
[2] addition or the use of 20,000 pounds of REST process
[3] tobacco basically just recovering its utilization by
[4] putting it into the G7 process which is basically a
[5] process to effectively utilize materials that otherwise
[6] would be waste.

[7] Q: The REST tobacco that was used, that 20,000
[8] pounds, went through the normal REST process?

[9] A: That's correct.

[10] Q: That is, water solubles were extracted and
[11] then re-applied?

[12] A: That's correct.

[13] Q: At concentrated nicotine levels?

[14] A: No.

[15] Q: Tell me how then?

[16] A: The final nicotine level was virtually the
[17] same, if anything, about three percent less than the
[18] starting tobacco.

[19] Q: Do you know if Reynolds has advised the FDA
[20] that its REST tobacco was used in commercially sold
[21] cigarettes?

[22] A: No, I do not know that.

[23] Q: Who asked you to make inquiry into whether
[24] or not REST was actually used in commercially sold
[25] cigarettes or did you do that on your own?

Page 265

[1] A: Would you repeat that question.

[2] Q: Between yesterday and today, who asked you
[3] to contact Dr. Suber?

[4] A: I did not contact Dr. Suber.

[5] Q: I misunderstood then. Who contacted Dr.
[6] Suber?

[7] A: Marilyn Forbes.

[8] MS. FORBES: And I have got his document
[9] and we are going to introduce that at the appropriate
[10] time in this deposition.

[11] MR. MAISTROS: Do you know if that document
[12] has been produced in any tobacco litigation?

[13] MS. FORBES: I don't know. I would assume
[14] given the millions of pages that have been produced, it
[15] has been. It's got a dock ID number on it.

[16] MR. MAISTROS: Mark this as the next
[17] exhibit.

[18] (Exhibit No. 22 marked for identification.)

[19] BY MR. MAISTROS:

[20] Q: Exhibit No. 22 is dated January 4, 1990.

[21] It's from J.D. de Bethizy to you. It's entitled
[22] "Objectives For Controlled Nicotine Cigarette Program."
[23] I ask you to read this document.

[24] First, do you recall receiving it?

[25] A: Not specifically at this time.

Page 266

[1] Q: Could you read the three objectives listed
[2] by J.D. de Bethizy and tell me if you agree with them?

[3] A: I am not in the position to agree or
[4] disagree.

[5] Q: Dr. de Bethizy says "Our objectives for the
[6] program," that is, controlled nicotine cigarette
[7] program, "to use cigarettes of uniform composition and
[8] 'tar' yield that vary would include:" one, "To evaluate
[9] nicotine uptake in smokers." You don't have an opinion
[10] as to whether that's true or not?

[11] A: I do not.

[12] Q: Two, "To evaluate the role played by
[13] nicotine and its related tobacco alkaloids in the
[14] formation of tobacco specific nitrosamines."

[15] Do you know if that was an objective of the
[16] nicotine controlled program?

[17] A: The controlled nicotine program was a
[18] process program. Our goal was to provide tobaccos with
[19] a range of nicotine for use in a multitude of studies.
[20] Nicotine RSM was one of those studies. This is
[21] something else, and basically Don was letting me know
[22] what he planned to do so as justification for us taking
[23] the time to prepare the extracts for his work.

[24] Q: This was a different application of the
[25] controlled nicotine program process or technology

Page 267

[1] separate from what you were working on?
[2] **A:** It was - no. He used materials that we
[3] made for studies if this work was done. I don't
[4] recollect whether or not it was done.
[5] **Q:** My point is, you were involved in process.
[6] You had as your objective a process of controlled
[7] nicotine, correct?
[8] **MS. FORBES:** Objection, mischaracterizes.
[9] **BY MR. MAISTROS:**
[10] **Q:** That's the title of the program, right?
[11] **A:** Right.
[12] **MS. FORBES:** Asked and answered.
[13] **BY MR. MAISTROS:**
[14] **Q:** You had as your goal the control of
[15] nicotine, but Dr. de Bethizy had a different use for the
[16] material unrelated to the processing aspect?
[17] **A:** Right.
[18] **MS. FORBES:** Objection, argumentative,
[19] motion to strike.
[20] **MR. MAISTROS:** He answered. You want to
[21] strike his answer?
[22] **MS. FORBES:** Strike your question.
[23] **BY MR. MAISTROS:**
[24] **Q:** You said right, right?
[25] **A:** Yeah. What we had was a tool. We had a

Page 268

[1] process tool that could do a number of things, one of
[2] which was to reduce nicotine or control nicotine in the
[3] tobacco. That was a unique capability. So if that
[4] material was used in a range of research programs and
[5] some product development programs, exploratory to
[6] achieve whatever purposes those various groups had in
[7] mind.
[8] **MR. MAISTROS:** Marilyn, let's take a little
[9] break and see if I can go through my notes and finish up
[10] with the proviso that I want to ask about the document
[11] you are going to use.
[12] (Off-the-record, brief recess.)
[13] **BY MR. MAISTROS:**
[14] **Q:** Do you know what project Delta was?
[15] **A:** I remember the term. I'm trying to
[16] remember - I do not remember specifically what its
[17] objectives were.
[18] **Q:** What about project Omega was?
[19] **A:** The same thing. There were many, many
[20] projects, studies, and I do not remember the objectives.
[21] **Q:** Did you have any other role in Premier
[22] other than what you have described today?
[23] **MS. FORBES:** Objection, over-broad.
[24] **THE WITNESS:** The role I had was to help
[25] develop processes to produce components of the product

Page 269

[1] and there were parts of that that we haven't talked
[2] about.
[3] **BY MR. MAISTROS:**
[4] **Q:** What parts?
[5] **MS. FORBES:** Objection, over-broad.
[6] **THE WITNESS:** We have already talked about
[7] the extracts and we talked about the substrate beads.
[8] We had some involvement in the carbon field source, not
[9] the major role and we figured out a way to clean the
[10] metal capsule.
[11] There was concern about lubricating oil
[12] from the machines that made those so we had to come up
[13] with a good way to clean that off.
[14] **BY MR. MAISTROS:**
[15] **Q:** Did you attend any press conferences where
[16] Premier was discussed?
[17] **A:** No.
[18] **Q:** Did you educate any people in the medical
[19] or scientific community concerning Premier?
[20] **A:** No.
[21] **Q:** Are you aware of people that did that at
[22] Reynolds?
[23] **A:** I know there was a big multi-hundred page
[24] document. How that was presented, I don't recollect.
[25] **Q:** It's the Premier monograph?

Page 270

[1] **A:** Right.
[2] **Q:** Did you participate in any specific portion
[3] of the Premier monograph?
[4] **A:** No.
[5] **MR. MAISTROS:** Subject to whatever you are
[6] going to ask, Marilyn, I am done. Thank you very much.
[7] **EXAMINATION BY COUNSEL FOR DEFENDANT**
[8] **R.J. REYNOLDS TOBACCO COMPANY**
[9] **BY MS. FORBES:**
[10] **Q:** Mr. Haberkern, you testified yesterday and
[11] today concerning about 20,000 pounds of REST process
[12] tobacco being used in G7. Do you recall that testimony?
[13] **A:** Yes.
[14] **MS. FORBES:** I would like to show you a
[15] document that we are going to mark as Exhibit No. 23.
[16] (Exhibit No. 23 marked for identification.)
[17] **BY MS. FORBES:**
[18] **Q:** Take a minute to look at that October 31,
[19] 1991 memo from Rhenda Steele to you.
[20] **A:** Okay.
[21] **Q:** This is the document that I showed you this
[22] morning on our last break received from Dr. Suber?
[23] **A:** Correct.
[24] **Q:** And as you testified yesterday, Dr. Suber
[25] reviewed and approved the pilot addition of REST tobacco

Page 271

[1] into G7?

[2] A: That's correct.

[3] Q: And as this document reflects, it was done
[4] at a ten percent rate?

[5] A: For clarification it says no more than ten
[6] percent. It still had to be - I believe it says in
[7] here it still had to be checked by brands to make sure
[8] there would be no inconsistency problem with G7.

[9] Q: Do you remember what brands did concerning
[10] that consistency question?

[11] A: I do not recollect specifically.

[12] Q: This 20,000 pounds of tobacco that had been
[13] through the REST process, had any extraction
[14] modification been performed?

[15] A: No.

[16] MS. FORBES: I don't have any further
[17] questions.

[18] FURTHER EXAMINATION BY COUNSEL FOR PLAINTIFFS

[19] PHYLLIS SMALL AND DENISE FUBINI, ET AL.

[20] BY MR. MAISTROS:

[21] Q: Were you familiar with this document before
[22] this morning?

[23] A: I only had a slight memory that we - I
[24] knew that we would have had to have had this material
[25] approved. I am glad that there was a document saying

Page 272

[1] that.

[2] Q: Do you know if this is the only REST
[3] tobacco that was ever approved for use in G7, this
[4] particular 20,000 pounds referenced on October 31, 1991?

[5] A: I cannot say that absolutely, but I believe
[6] that is the case.

[7] Q: What is a pilot run of REST tobacco?

[8] A: We have a - had a pilot plant that was
[9] REST only. It dealt only with water and the intention
[10] of that pilot plant was to test the practicality and
[11] feasibility of scaling up the water extraction and the
[12] re-equilibration of the extracts back into the tobacco.
[13] That was the pilot plant.

[14] A pilot run was basically running that
[15] equipment to check out the equipment's performance and
[16] then to evaluate the material that came out to study its
[17] characteristics.

[18] Q: How long was that pilot plant in operation?

[19] A: Calendar time?

[20] Q: Yes.

[21] A: Six, nine months, something like that.

[22] Q: How long did it take to produce 20,000
[23] pounds of REST tobacco?

[24] A: It all depended on what rates we would run.
[25] If we ran it flat out you mean?

Page 273

[1] Q: Yes.

[2] A: We would run 600 to 800 pounds an hour.

[3] Q: How many hours a day was the pilot plant
[4] running?

[5] A: We ran the pilot - it was a major effort
[6] to run it. We wouldn't run it anymore than one day a
[7] week, not every - we wouldn't run it any more than one
[8] day a week. If I remember right, we would run it about
[9] ten, 12 hours, but a good part of that was start-up,
[10] shutdown, clean up. Operating hours, maybe five hours
[11] during a running day to get good material out.

[12] Q: Do you know how many pounds of REST tobacco
[13] were produced in the six to nine months the pilot plant
[14] was in operation?

[15] A: I have no idea.

[16] Q: Was it more than 20,000 pounds?

[17] A: Yes.

[18] Q: Was it a lot more than 20,000 pounds?

[19] A: Maybe 80,000, 100,000.

[20] Q: What did Reynolds do with the remaining 60
[21] to 80 thousand pounds that wasn't approved for use in
[22] the G7?

[23] A: Prior to approval, we were landfilling it,
[24] and there was a cost there which is one of the reasons
[25] we had this approval done. How much more may have gone

Page 274

[1] through, I really don't know.

[2] Q: But you are not suggesting by your
[3] testimony that this was the only REST tobacco that was
[4] used in G7?

[5] MS. FORBES: Objection, asked and answered.

[6] THE WITNESS: My recollection, I do not
[7] recollect how much was reused through G7 or if any more
[8] was reused through G7.

[9] BY MR. MAISTROS:

[10] Q: Did you have excess extract from the REST
[11] process that was not used?

[12] A: Sometimes.

[13] Q: What did you do with that?

[14] A: It depended on whether there was a
[15] potential use for that extract, in which case it would
[16] be spray dried, otherwise it was run at a very slow rate
[17] into the sewer system with the city's approval.

[18] MR. MAISTROS: I have no further questions.

[19] MS. FORBES: Michael, any further
[20] questions?

[21] MR. SOBOL: Yeah, just a couple.

[22] EXAMINATION BY COUNSEL FOR PLAINTIFFS

[23] THE PEOPLE OF THE STATE OF CALIFORNIA, ET AL.

[24] BY MR. SOBOL:

[25] Q: Mr. Haberkern, do you know what the

Page 275

[1] percentage nicotine was of this 20,000 pounds of tobacco
[2] that was incorporated into the G7?

[3] **MS. FORBES:** Objection, asked and answered.

[4] **THE WITNESS:** No, I do not know
[5] specifically.

[6] **BY MR. SOBOL:**

[7] **Q:** Of the 80,000 to 100,000 pounds of REST
[8] tobacco that was produced through the pilot facility,
[9] were there varied levels of nicotine among those
[10] tobaccos?

[11] **A:** Yes, depending on what material we started
[12] with.

[13] **Q:** And do you know whether or not this 20,000
[14] pounds all had the same level of nicotine?

[15] **MS. FORBES:** Objection, asked and answered.

[16] **THE WITNESS:** If all this 20,000 pounds had
[17] the same level of nicotine, do I know that it did, I do
[18] not. It says, though, that all this tobacco came from
[19] one initial starting blend.

[20] **BY MR. SOBOL:**

[21] **Q:** Well, the REST process was capable of
[22] producing varied levels of nicotine from a starting
[23] blend, is that correct?

[24] **A:** That is incorrect.

[25] **Q:** The REST process in conjunction with the

Page 276

[1] auxiliary process was capable of producing varied levels
[2] of nicotine from different tobaccos, is that correct?

[3] **MS. FORBES:** Objection, asked and answered.

[4] **THE WITNESS:** That is correct in concept,
[5] but we did not have a pilot scale ancillary process to
[6] remove nicotine. That was in another facility, a lot
[7] smaller scale. In those cases we would produce - could
[8] produce no more than ten pounds a day.

[9] **BY MR. SOBOL:**

[10] **Q:** When you spoke with Barry Fagg a number of
[11] weeks ago regarding your deposition, did you talk about
[12] with him the use of REST tobaccos in Reynolds' products?

[13] **A:** No.

[14] **Q:** Have you spoken with Mr. Fagg since
[15] yesterday?

[16] **A:** No.

[17] **Q:** Do you have any idea approximately how many
[18] cigarettes can be produced from 20,000 pounds of this
[19] kind of tobacco?

[20] **MS. FORBES:** Objection, over-broad, calls
[21] for speculation, ambiguous.

[22] **THE WITNESS:** I have no idea. If you have
[23] half an hour I could try to remember and do some
[24] calculating, but offhand, I have no idea.

[25] **BY MR. SOBOL:**

Page 277

[1] **Q:** How many pounds of tobacco fit in the tersa
[2] bales that you helped design?

[3] **A:** I did not help design tersa bales.

[4] **Q:** You are right. How many pounds of tobacco
[5] fit inside of a tersa bale?

[6] **A:** Nominally 900.

[7] **Q:** What are the dimensions of a tersa bale?

[8] **A:** Nominally 40 inches in each direction.

[9] It's not a cube. It's nominally 40 inches in each
[10] direction.

[11] **Q:** Are the tersa bales square or rectangular?
[12] Is it a cube?

[13] **A:** It is not an exact cube.

[14] **Q:** Did you state that there were no extraction
[15] modifications done with those 20,000 pounds?

[16] **A:** That's correct.

[17] **Q:** And how do you know that?

[18] **A:** Well, for one thing it says it in the memo
[19] here.

[20] **Q:** Do you have any other basis?

[21] **A:** No. This was seven years ago.

[22] **Q:** So you have no other basis other than the
[23] memo which was shown to you since yesterday?

[24] **MS. FORBES:** Objection, asked and answered.

[25] **THE WITNESS:** The only other basis I have

Page 278

[1] is that knowing the company, the company would not put
[2] anything in the product that was not fully determined to
[3] be similar to what we do on a day-to-day basis.

[4] **BY MR. SOBOL:**

[5] **Q:** Subsequent to October 31, 1991, were there
[6] other REST tobaccos run through the pilot facility?

[7] **A:** Yes.

[8] **Q:** Approximately how many pounds?

[9] **A:** I couldn't tell you, but I'm sure in the
[10] thousands, maybe tens to thousands of pounds.

[11] **Q:** Do you know if that tobacco was ever
[12] incorporated in RJR products?

[13] **MS. FORBES:** Objection, asked and answered.

[14] **THE WITNESS:** I am - I do not recollect
[15] exactly, but I believe this was the first material that
[16] was approved, so all the other material would have been
[17] landfilled.

[18] **BY MR. SOBOL:**

[19] **Q:** Do you know if there were subsequent
[20] approvals subsequent to October 31, 1991 for the use of
[21] REST produced processed tobaccos in Reynolds' products?

[22] **A:** We have already asked and answered that
[23] question. I do not recollect any.

[24] **MR. SOBOL:** I don't have any further
[25] questions.

Page 279

[1] MS. FORBES: Just a follow-up question.
[2] FURTHER EXAMINATION BY COUNSEL FOR DEFENDANT
[3] R.J. REYNOLDS TOBACCO COMPANY
[4] BY MS. FORBES:

[5] Q: When you were using REST and auxiliary
[6] processes to do extract modifications, what size batches
[7] of tobacco were you doing that research work in?

[8] A: Well, we would use the batch extraction
[9] tanks that we had set up in 611 16 building to prepare
[10] that extract. It would take our whole staff a long day
[11] to make maybe ten pounds.

[12] Q: That was not done at this REST pilot
[13] facility?

[14] A: No.

[15] Q: To the best of your knowledge, was any
[16] tobacco that had been through the extraction
[17] modification process ever used in commercial product?

[18] MR. MAISTROS: The documentary says it has.

[19] MS. FORBES: No.

[20] THE WITNESS: Would you repeat the
[21] question, please?

[22] BY MS. FORBES:

[23] Q: Yes. Was any tobacco that had the extract
[24] modification process occur?

[25] A: Any extract modification process?

Page 280

[1] Q: Right, been used in commercial product?

[2] A: To my knowledge, never.

[3] MS. FORBES: Thank you. I have no further
[4] questions. This concludes this deposition.

[5] (Signature reserved.)

[6] (Whereupon, at 11:36 a.m., the taking of
[7] the instant deposition ceased.)

[8]
[9] Signature of the Witness
[10] SUBSCRIBED and SWORN TO before me this _
[11] day of _____, 19____.

[12]
[13] NOTARY PUBLIC
[14] My Commission expires: _
[15]
[16]
[17]
[18]
[19]
[20]
[21]
[22]
[23]
[24]
[25]

Page 281

[1] ERRATA SHEET

[2] RE: THE PEOPLE OF THE STATE OF CALIFORNIA, ET AL. V.

[3] PHILIP MORRIS, INC., ET AL.

[4] DEPOSITION OF: RICHARD G. HABERKERN

[5] Please read this original deposition

[6] with care, and if you find any corrections or

[7] changes you wish made, list them by page and line

[8] number below. DO NOT WRITE IN THE DEPOSITION

[9] ITSELF. Return the deposition to this office after

[10] it is signed. We would appreciate your prompt

[11] attention to this matter.

[12] To assist you in making any such

[13] corrections, please use the form below. If

[14] supplemental or additional pages are necessary,

[15] please furnish same and attach them to this errata

[16] sheet.

[17] Page ____ Line ____ should

[18] read: _____

[19] Page ____ Line ____ should

[20] read: _____

[21] Page ____ Line ____ should

[22] read: _____

[23] Page ____ Line ____ should

[24] read: _____

[25]

Page 282

[1] Page ____ Line ____ should

[2] read: _____

[3] Page ____ Line ____ should

[4] read: _____

[5] Page ____ Line ____ should

[6] read: _____

[7] Page ____ Line ____ should

[8] read: _____

[9] Page ____ Line ____ should

[10] read: _____

[11] Page ____ Line ____ should

[12] read: _____

[13] Page ____ Line ____ should

[14] read: _____

[15] Page ____ Line ____ should

[16] read: _____

[17] Page ____ Line ____ should

[18] read: _____

[19] Page ____ Line ____ should

[20] read: _____

[21] Page ____ Line ____ should

[22] read: _____

[23] Page ____ Line ____ should

[24] read: _____

[25] ALN

Page 283

CERTIFICATE OF REPORTER

[1] CERTIFICATE OF REPORTER
[2]
[3] STATE OF NORTH CAROLINA)
[4] COUNTY OF MECKLENBURG)
[5] I, Andrea L. Nobrega, the officer before
[6] whom the foregoing deposition was taken, do hereby
[7] certify that the witness whose testimony appears
[8] in the foregoing deposition was duly sworn by me;
[9] that the testimony of said witness was taken by me
[10] to the best of my ability and thereafter reduced
[11] to typewriting under my direction; that I am
[12] neither counsel for, related to, nor employed by
[13] any of the parties to the action in which this
[14] deposition was taken, and further that I am not a
[15] relative or employee of any attorney or counsel
[16] employed by the parties thereto, nor financially
[17] or otherwise interested in the outcome of the
[18] action.

[19]
[20] ANDREA L. NOBREGA
[21] Court Reporter and Notary
[22] Public in and for
[23] North Carolina.
[24]

[25] My commission expires: 11-25-01